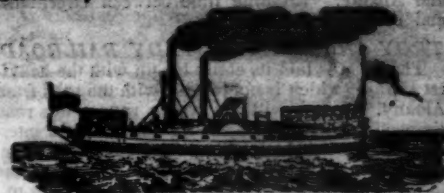
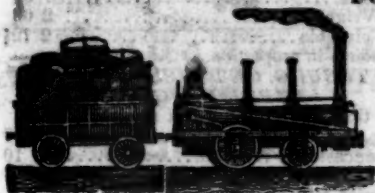


# AMERICAN RAILROAD JOURNAL, AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,

AND MINES.

ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 105 CHESTNUT STREET, PHILADELPHIA, AT FIVE DOLLARS PER ANNUM.

SECOND QUARTO SERIES, VOL. III, No. 3)

SATURDAY, JANUARY 16, 1847.

[WHOLE No. 552, Vol. XX]

## AMERICAN RAILROAD JOURNAL.

OFFICE AT THE FRANKLIN HOUSE,  
105 Chestnut Street,  
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, in advance.

### RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum.....	5 00

**BOSTON AND PROVIDENCE RAILROAD.** Passenger Notice. Summer Arrangement. On and after Monday, Sept. 28, 1846, the Passenger Trains will run as follows:

For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m.

Accommodation Trains, leave Boston at 7 $\frac{1}{2}$  a.m. and 3 $\frac{1}{2}$  p.m., and Providence at 8 a.m. and 3 $\frac{1}{2}$  p.m.

Dedham trains, leave Boston at 9 a.m.; 3 p.m., 5 $\frac{1}{2}$  p.m., and 10 $\frac{1}{2}$  p.m. Leave Dedham at 8 a.m. and 4 $\frac{1}{2}$  and 9 p.m.

Stoughton trains, leave Boston at 11 $\frac{1}{2}$  a.m. and 4-10 p.m. Leave Stoughton at 8 a.m. and 2 $\frac{1}{2}$  p.m.

All baggage at the risk of the owners thereof.  
31 ly W. RAYMOND LEE, Sup't.

**BRANCH RAILROAD AND STAGES** Connecting with the Boston and Providence Railroad.

Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I. Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

## BOSTON AND MAINE RAILROAD.

Upper Route, Boston to Portland via, Reading, Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Winter Arrangement, 1846-7.

On and after October 5th, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows:

Boston for Portland at 7 $\frac{1}{2}$  a.m. and 2 $\frac{1}{2}$  p.m.  
Boston for Great Falls at 7 $\frac{1}{2}$  a.m., 2 $\frac{1}{2}$  and 3-25 p.m.

Boston for Haverhill at 7 $\frac{1}{2}$  and 11 $\frac{1}{2}$  a.m., 2 $\frac{1}{2}$ , 3-25 and 5 p.m.

Boston for Reading at 7 $\frac{1}{2}$  and 11 $\frac{1}{2}$  a.m., 2 $\frac{1}{2}$ , 3-25 5 and 6 $\frac{1}{2}$  p.m.

Portland for Boston at 7 $\frac{1}{2}$  a.m., and 3 p.m.  
Great Falls for Boston at 6 $\frac{1}{2}$  and 9 $\frac{1}{2}$  a.m., and 4 $\frac{1}{2}$  p.m.

Haverhill for Boston at 7 $\frac{1}{2}$ , 8 $\frac{1}{2}$ , and 11 a.m. and 3 and 6 $\frac{1}{2}$  p.m.

Reading for Boston at 7, 8 $\frac{1}{2}$  and 9 $\frac{1}{2}$  a.m., 12 m., 1 $\frac{1}{2}$ , 4 and 7 $\frac{1}{2}$  p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

1y31 CHAS. MINOT, Super't.

## THE BEST RAILROAD ROUTE TO THE

Lake and Buffalo, from Cincinnati.

Take Cars to Xenia, 65 miles; take Stage to Mansfield, 88 miles; thence by Cars to Sandusky, 56 miles to the Lake; thence Steamboat to Buffalo, 230 miles.

Fare from Cincinnati to Sandusky.....\$8 00  
" " Sandusky to Buffalo, Cabin.....6 00  
" " " " Steerage....4 50

Fare by this route, although the cheapest across the state, will be reduced in a short time, railroad lengthened, and speed increased.

Leave Cincinnati in the morning, arrive at Columbus at night.

Leave Columbus in the morning, arrive at Sandusky same day.

Leave Sandusky, by Boat, in the morning, arrive at Buffalo next morning in time for the Cars north and east for Niagara Falls, Canada, Saratoga Springs, Troy, Albany, Boston, New York, Washington, or Philadelphia.

Passengers should not omit to pay their fare through from Cincinnati to Sandusky, or from Columbus to Sandusky via Mansfield; as this route is the only one that secures 56 miles [this road is run over in 2 $\frac{1}{2}$  h. 50m.] most railroad which is new, and is the shortest, cheapest and most expeditious across the state.

Fares on the New York railroads are about to be reduced.

B. HIGGINS, Sup't, etc.  
Sandusky, Ohio. M. & S. C. R. R. Co.

## SUMMER ARRANGEMENT.—NEW YORK

AND ERIE RAILROAD LINE, from April 1st until further notice, will

run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

FOR PASSENGERS—  
Leave New York at 7 A. M. and 4 P. M.  
" Middletown at 6 $\frac{1}{2}$  A. M. and 5 $\frac{1}{2}$  P. M.

FARE REDUCED TO \$1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

FOR FREIGHT—  
Leave New York at 5 P. M.  
" Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P. M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts. H. C. SEYMOUR, Sup't. March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board. 13 if

## NORWICH AND WORCESTER RAILROAD.

Summer Arrangement, commencing Monday, April 6, 1846.

Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4 $\frac{1}{2}$  p.m. Leave Worcester, at 10 a.m., and 4 $\frac{1}{2}$  p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1 $\frac{1}{2}$  p.m. train from Boston.

New York Train via Long Island Railroad: Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4 $\frac{1}{2}$  p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Low when paid for Tickets than when paid in the Cars. 321y J. W. STOWELL, Sup't.



**TROY RAILROADS.—IMPORTANT NOTICE.**

Troy and Greenbush Railroad, forming a continuous track from Boston to Buffalo and Saratoga Springs.

This road is new, and laid with the heaviest iron H rail. Trains will always be run on this road connecting at Greenbush each way with the trains to and from Boston and intermediate places, leaving Greenbush daily at 1½ p.m. and 6 p.m., or on arrival of the trains from Boston, leave Troy at 7½ a.m. and 4½ p.m., or to connect with trains to Boston.

Trains also run hourly on this road between Troy and Albany. Running time between Greenbush and Troy, 15 minutes.

**TROY AND SCHENECTADY RAILROAD.**

This road is laid its entire length with the heaviest H rail, which is not the fact with the road from Albany. Trains will always be run on this road connecting each way, to and from Buffalo and intermediate places. Leave Troy for Buffalo at 7½ a.m. and 1 p.m. and 6½ p.m., or to connect with the trains for the west; leave Schenectady at 2½ a.m., 8½ a.m., 1 p.m. and 3½ p.m., or on arrival of the trains from Buffalo and intermediate places.

**TROY AND SARATOGA RAILROAD.**

THE ONLY DIRECT ROUTE.

No change of passenger, baggage or other cars on this route. Cars leave Troy for Ballston, Saratoga Springs, Lake George and White Hall at 7½ a.m., (arriving one hour in advance of the train from Albany,) and at 3½ p.m. Returning, leave Saratoga at 9 a.m. and 3½ p.m., (reaching Troy in time for the evening boats to New York.) Cars also leave Troy for the Burrough at 3½ p.m. and 7 p.m., connecting with packet boats for the north. This takes passengers from New York and Boston to Montreal in 44 hours.

N.B. Travellers will find the routes through Troy most convenient and economical, and as expeditious as any other. The steamboats to and from New York land within a few steps of the railroad office, and passengers are taken up and landed by the different railroad lines at the doors of principal hotels, thus saving all necessity for, and annoyance from, hack drivers, cabmen, runners, etc.

Aug. 3, 1846.

1y 32

**BALTIMORE AND OHIO RAILROAD.**

MAIN STEM. The Train carrying the

Great Western Mail leaves Bal-

timore every morning at 7½ and

Cumberland at 8 o'clock, passing Ellicott's Mills,

Frederick, Harpers Ferry, Martinsburg and Han-

cock, connecting daily each way with—the Wash-

ington Trains at the Relay House seven miles

from Baltimore, with the Winchester Trains at

Harpers Ferry—with the various railroad and

steamboat lines between Baltimore and Philadelphia

and with the lines of Post Coaches between Cum-

berland and Wheeling and the fine Steamboats on

the Monongahela Slack Water between Brown-

sville and Pittsburgh. Time of arrival at both Cum-

berland and Baltimore 5½ P. M. Fare between

those points \$7, and 4 cents per mile for less distan-

ces. Fare through to Wheeling \$11 and time about

36 hours, to Pittsburgh \$10, and time about 32 hours

Through tickets from Philadelphia to Wheeling

\$13, to Pittsburgh \$13. Extra train daily except

Sundays from Baltimore to Frederick at 4 P. M.,

and from Frederick to Baltimore at 8 A. M.

**WASHINGTON BRANCH.**

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances.

**THE SUBSCRIBER IS PREPARED TO** execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers and Wire Rods, etc., etc.

PETER COOPER 17 Burling Slip.

1y 10

New York.

**NEW RAILROAD ROUTE FROM BUFFALO TO CINCINNATI.**

Passengers destined for

Columbus and Cincinnati,

Louisville, Ky., St. Louis, Mo., Memphis, Tenn.,

Vicksburg, Natchez, New Orleans, and all interme-

diate ports, will find a new, and the most expedi-

tious and comfortable Route, by taking Steamboats

at Buffalo, landing at Sandusky City, Ohio, dis-

tance..... 220 miles.

From thence by Cars, over the Mansfield

Railroad which is new and just opened

[laid with heavy iron,] to Mansfield,

distance..... 56 "

Thence by Stage via Columbus to Xenia

over gravel and Macadamized Road,

(the best in the state,) in new coaches,

distance..... 88 "

Thence, over the Little Miami Railroad,

from Xenia to Cincinnati, distance.... 65 "

**TIME.**

From Buffalo to Sandusky..... 24 hours.

Leave Sandusky 5 a.m. to Columbus.... 14 "

From Columbus to Cincinnati..... 15 "

Or say 30 hours from Sandusky to Cincinnati

over this route, including delays.

**FARE.**

From Buffalo to Sandusky, Cabin..... \$6 00

" " " " " Steerage..... 3 00

" Sandusky to Columbus..... 4 50

" " " " " through to Cincinnati..... 8 00

Passengers should not omit to pay their fare through from Sandusky City to Cincinnati and take receipts availing themselves of the benefit of a contract existing between the said Railroad and Stage Co's, securing 121 miles travel by good Railroad and 88 miles by Stage, in crossing from Lake Erie to the Ohio river, in the space of 30 hours.

Passengers destined for St. Louis, or any point below on the Mississippi, will save by taking this route, from 4 to 6 days time and travel, and nearly half the expense, over the Chicago and Peoria route to the above places.

Fare by this route, although the cheapest, will in a short time be reduced, Railroad lengthened, and speed increased.

B. HIGGINSON, Supt. etc.

M. & S. C. R. R. Co.

Sandusky City, Ohio.

**NEW YORK & HARLEM RAILROAD**

CO.—Winter Arrangement.

On and after Monday, November 23,

1846, the cars will run as follows:

Leave 27th street for 42d street, Deaf and Dumb

Institute, Yorkville, Harlem, Morrisania, and Wil-

liams' Bridge, at 7 o'clock a.m. From City Hall

for above named places, 2 p.m. [freight train,] 2 30

p.m. 6 p.m. to Morrisania only.

Leave City Hall for Harlem, Morrisania, Ford-

ham and Williams' Bridge, at 7 45 a.m., and 10 45

a.m.; 1 15 p.m., 2 p.m. [freight train,] 2 30 p.m. and

3 45 p.m.

Leave City Hall for Hunt's Bridge, Bronx, Tuc-

kahoe, Hart's Corners, White Plains, Davis' Brook,

Unionville and Pleasantville, [Pleasantville 4 miles

from Sing Sing,] 7 45 and 10 45 a.m.; 1 15 p.m., 2

p.m. [freight train,] and 3 45 p.m.

**RETURNING.**

Leave Pleasantville, at 8, 10, [freight train,] and

11 a.m.; 1 30, and 4 p.m.

Leave White Plains, at 8 12, 10 30, [freight train]

and 11 20 a.m.; 1 50, and 4 20 p.m.

Leave Tuckahoe, 8 35, 10 55, [freight train,] and

11 35 a.m.; 2 05, and 4 35 p.m.

Leave Williams' Bridge at 7 45, 8 50 and 11 50 a.

m.; 2 40, 4, and 4 50 p.m.

Leave Morrisania 8 and 9 05 a.m.; 12 05, 2 35,

4 20, 5 05 and 6 p.m.

Leave Yorkville, at 8 12 a.m.; 4 35 and 6 15 p.m.

**SUNDAY ARRANGEMENTS.**

Leave City Hall for Pleasantville and interme-

diate places, at 7 45 a.m.; 1 15 and 3 p.m.

Leave Pleasantville for City Hall, at 8 a.m.; 11

and 3 15 p.m.

Leave City Hall for Williams' Bridge and inter-

mediate places, 10 45 a.m.; 2 30 p.m.

Leave Williams' Bridge for City Hall, at 8 50

and 11 50 a.m.; 1, 3 45 and 4 05 p.m.

**BALTIMORE AND SUSQUEHANNA**

Railroad.—Reduction of Fare. Morning and

Afternoon Trains between Balti-

more and York.—The Passenger

trains run daily, except Sunday, as follows:

Leaves Baltimore at..... 9 a.m. and 3½ p.m.

Arrives at..... 9 a.m. and 6½ p.m.

Leaves York at..... 5 a.m. and 3 p.m.

Arrives at..... 12½ p.m. and 8 p.m.

Leaves York for Columbia at..... 1½ p.m. and 8 a.m.

Leaves Columbia for York at..... 8 a.m. and 2 p.m.

**FARE.**

Fare to York..... \$1 50

" Wrightsville..... 2 00

" Columbia..... 2 12½

Way points in proportion.

**PITTSBURG, GETTYSBURG AND**

**HARRISBURG.**

Through tickets to Pittsburg via stage to Har-

risburg..... \$9

Or via Lancaster by railroad..... 10

Through tickets to Harrisburg or Gettysburg... 3

In connection with the afternoon train at 3½ o'clock,

a horse car is run to Green Spring and Owings'

Mill, arriving at the Mills at..... 5½ p.m.

Returning, leaves Owings' Mills at..... 7 a.m.

D. C. H. BORDLEY, Supt.

31 1y Ticket Office, 63 North st.

**LEXINGTON AND OHIO RAILROAD.**

Trains leave Lexington for Frankfort daily,

at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lex-

ington daily, at 8 o'clock a.m. and 2 p.m. Dis-

tance, 26 miles. Fare \$1 25.

On Sunday but one train, 5 o'clock a.m. from

Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to

15th March) is 6 o'clock a.m. from Lexington, and

ma. 9. from Frankfort, other hours as above.

351y

**SOUTH CAROLINA RAILROAD.—A**

Passenger Train runs daily from Charleston,

on the arrival of the boats from

Wilmington, N. C., in connection

with trains on the Georgia, and Western and Atlan-

tic Railroads—and by stage lines and steamers con-

nects with the Montgomery and West Point, and

the Tusculum Railroad in N. Alabama.

Fare through from Charleston to Montgomery

daily..... \$26 50

Fare through from Charleston to Huntsville,

Decatur and Tusculum..... 22 00

The South Carolina Railroad Co. engage to re-

ceive merchandize consigned to their order, and to

forward the same to any point on their road; and to

the different stations on the Georgia and Western

and Atlantic railroad; and to Montgomery, Ala., by

the West Point and Montgomery Railroad.

1y 25 JOHN KING, Jr. Agent.

**CENTRAL RAILROAD-FROM SAVAN-**

nah to Macon. Distance 190 miles.

This Road is open for the trans-

portation of Passengers and

Freight. Rates of Passage, \$8 00. Freight—

On weight goods generally..... 50 cts. per hundred.

On measurement goods..... 13 cts. per cubic ft.

On brls. wet (except molasses

and oil)..... \$1 50 per barrel.

On brls. dry (except lime).... 80 cts. per barrel.

On iron in pigs or bars, cast-

ings for mills, and unboxed

machinery..... 40 cts. per hundred.

On hhds. and pipes of liquor,

not over 120 gallons..... \$5 00 per hhd.

On molasses and oil..... \$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded

free of commission. THOMAS PURSE,

4y 40 Gen'l. Supt. Transportation.

**MANUFACTURE OF PATENT WIRE**

Rope and Cables for Inclined Planes, Stand-

ing Ship Rigging, Mines, Cranes, Tillers etc., by

JOHN A. ROEBLING, Civil Engineer,

Pittsburgh, Pa.

These Ropes are in successful operation on the

planes of the Portage Railroad in Pennsylvania, on

the Public Slips, on Ferries and in Mines. The

first rope put upon Plane No. 3, Portage Railroad,

has now run 4 seasons, and is still in good condi-

tion. 2y 19 1y



**CENTRAL AND MACON AND WESTERN**  
Railroads, Ga.—These Roads with the Western and Atlantic Railroad

of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

Savannah to Macon—Central Railroad ..... 190  
Macon to Atlanta—Macon and Western ..... 101  
Atlanta to Oothcaloga—Western and Atlantic... 80  
Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings.....	To Atlanta.	To Oothcaloga.
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grist Stones.....	0 50	0 75
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot.....	0 20	0 25
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot.....	0 20	0 25
Crockery, per cubic foot.....	0 15	0 35
Molasses and Oil, per bhd., (smaller casks in proportion).....	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each.....	1 25	1 50
Ploughs, (small,) and Wheelbarrows.....	0 80	1 05
Salt, per Liverpool Sack.....	0 70	0 95

Passage—Savannah to Atlanta, \$10; Children, under 12 years of age, half price, Savannah to Macon, \$7.

Goods consigned to the subscriber will be forwarded free of Commissions.

Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, Forwarding Agent, C. R. R.

Savannah, Aug. 15th, 1846.

**GREAT SOUTHERN MAIL LINE! VIA**  
Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans.

The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4 P.M., Philadelphia at 10 P.M., and Baltimore at 6 A.M., proceed without delay at any point, by this line, reaching Richmond in eleven, Petersburg in thirteen and a half hours, and Charleston, S. C., in two days from Baltimore.

Fare from Baltimore to Charleston.....\$21 00

For Tickets, or further information, apply at the Southern Ticket Office, adjoining the Washington Railroad Office, Pratt street, Baltimore, to

STOCTON & FALLS, Agents.

**RAILROAD SCALES.—THE ATTENTION**  
of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearings and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.

Factory, 9th street, near Cones, cor. Melon st.

Office, No. 3 North 5th street,

Philadelphia, Pa.

**GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.**

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and the Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenaula River, in Cass Co., Georgia.

RATES OF FREIGHT.		Between Augusta and Oothcaloga, 80 miles.	Between Charleston and Oothcaloga, 336 miles.
1st class.	Boxes of Hats, Bonnets, and Furniture, per cubic foot.....	0 16	0 25
2d class.	Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	0 90	1 40
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Bar and Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 55	0 75
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Feathers, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.	0 37 1/2	0 62 1/2
	Cotton, per 100 lbs.....	0 45	0 65
	Molasses, per hogshead.....	8 50	13 50
	" " barrel.....	2 00	3 25
	Salt per bushel.....	0 17	95
	Salt per Liverpool sack.....		
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows.....	0 75	1 37

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,

Ch. Eng. and Gen. Agent.

Augusta, Sept. 2d, 1846.

**THE WESTERN AND ATLANTIC**  
Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,

Chief Engineer.

Atlanta, Georgia, April 16th, 1846.

**TO RAILROAD COMPANIES AND MANUFACTURERS**  
of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out in side.

THOMAS & EDMUND GEORGE,

E. cor. 12th and Market sts., Philad., Pa.

17

**LITTLE MIAMI RAILROAD.—OPEN**  
TO SPRINGFIELD—Distance 84 miles.

connecting at Xenia and Springfield with Messrs. Neil, Moore,

& Co's daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City, via Urbana, Bellefontaine, Kenion, and the Mad river and Lake Erie railroad, or Columbus, Delaware, and the Mansfield and Sandusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as follows: Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 35 minutes A. M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

Fare—From Cincinnati to Lebanon....\$1 00  
" " " Xenia.....1 50  
" " " Springfield...2 00  
" " " Columbus...4 00  
" " " Sandusky city 6 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company, on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every \$500 in value over that amount.

The 11 P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th instant.

A freight train will run daily.

W. H. CLEMENT, Sup't.

**PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.**

Winter Arrangement.

Philadelphia for Baltimore...8 a.m. and 4 p.m.

Baltimore for Philadelphia...9 a.m. and 8 p.m.

Connecting in Baltimore with Mail Lines south and west, as per notice of the Baltimore and Ohio Railroad—and with Mail Lines north from Philadelphia, both morning and afternoon.

Sundays, the Morning Lines do not run in either direction.

Accommodation train from Wilmington to Philadelphia, leaves Wilmington at 8 a.m., and returns at 2 p.m.

J. R. TRIMBLE,

Engineer and General Superintendent.

**LAWRENCE'S ROSENDALE HYDRAULIC CEMENT.**  
This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floods and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight paper barrels, by JOHN W. LAWRENCE,

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office.

3217

**SPRING STEEL FOR LOCOMOTIVES,**

Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1 1/2 to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent

Albany Iron and Nail Works,

**VALUABLE PROPERTY ON THE MILL DAM.** For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 69,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x33 ft. with lathes, work benches, Work shop, 96x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, turnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45 feet two stories high, with a shed part 45x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x35 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja45

**TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.**

#### PASCAL IRON WORKS.

##### WELDED WROUGHT IRON TUBES

From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T, L, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by  
**NORRIS, TASKER & MORRIS.**  
Warehouse S. E. Corner of Third & Walnut Streets,  
**PHILADELPHIA.**

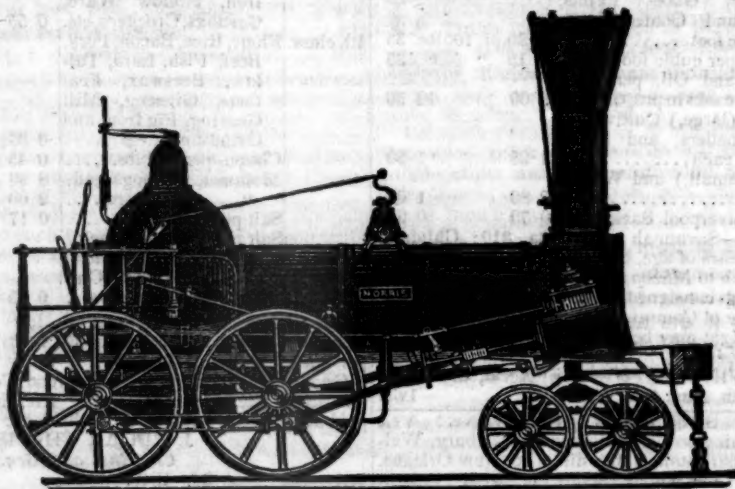
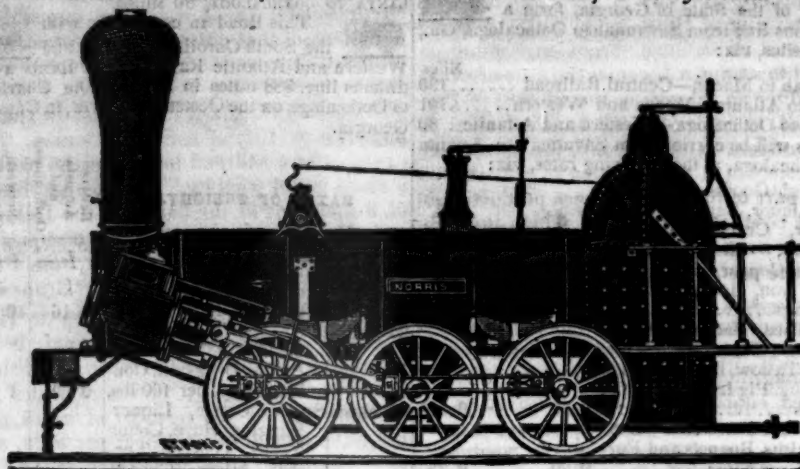
**PATENT INDESTRUCTIBLE WATER PIPES.** The subscribers continue to manufacture the above Pipes, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits.—This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly indestructible. The prices are less than those of iron or lead. We also manufacture Basins and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

**J. BALL & CO.**  
**TO LOCOMOTIVE AND MARINE ENGINE BOILER BUILDERS.** Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

**MORRIS TASKER & MORRIS,**  
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 11f

## NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



**MANUFACTURE** their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15 inches Diameter of Cylinder,	× 20 inches Stroke.
"	2,	14	" " " × 24 " "
"	3,	14½	" " " × 20 " "
"	4,	12½	" " " × 20 " "
"	5,	11½	" " " × 20 " "
"	6,	10½	" " " × 18 " "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion. Castings of all kinds made to order; and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

**NORRIS, BROTHERS.**

**THE NEWCASTLE MANUFACTURING** Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.  
**ANDREW C. GRAY,**  
a45 President of the Newcastle Manuf. Co.

**RAILROAD IRON AND LOCOMOTIVE** Tyres imported to order and constantly on hand by  
**A. & G. RALSTON**  
Mar. 20f 4 South Front St., Philadelphia.

**KEARNEY FIRE BRICK. F. W. BRINLEY,** Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, 4 mos. from delivery of brick on board. Refer to

James P. Allaire, }  
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25,000 to 30,000 made weekly. 25



From the United States Gazette.  
The Central Railroad.

THOMAS P. COPE, Esq.—Sir: The project of connecting the city of Philadelphia with her sister city of Pittsburg by railroad, being one of vast importance and of engrossing interest at this time, it becomes the duty of every one feeling an interest in the welfare of Philadelphia, to contribute all in his power to give confidence and success to the movement. The project of a subscription of \$2,500,000 on the part of the city, has been productive of various conflicting views, of which the public prints have been the constant vehicles for some time past.

Many—and these I think compose the greatest number of persons opposed to a subscription on the part of the city—are appalled at the magnitude of the undertaking, and the supposed enormous expense involved in its completion; whence arises the conviction, or at least the apprehension, that the work will never pay. That while the burden of expense will be borne by the city, its advantages will be general—the districts for instance, participating equally in them.

The Councils may reasonably be supposed to hesitate between their duty to promote the "trade and welfare" of the city, and a just regard for the number and respectability of those who hold these opinions. This being also the view, doubtless, of many capitalists and moneyed men, having reference to a supposed cost of from \$5,000,000 to \$10,000,000, a consequent apathy may be expected in coming forward to subscribe for the stock, especially if the number of those—and we know they will be numerous—who come forward through patriotic motives, should be unequal to the task.

We know there is abundant capital in Philadelphia; and if it can be shown that it will be a paying concern, patriotism will at once be stimulated in others, a great number of those who oppose the city subscription, would doubtless become reconciled to the measure, and complete and speedy success would crown the enterprise. If it can be made to appear, with a reasonable degree of certainty, that a railroad may be constructed from Harrisburg to Pittsburg for \$4,500,000, capable of accommodating all the business that may offer, with certainty and despatch, then it will require no farther proof that it will pay.

This is to be done by making available at a certain extent the works already forming the line of communication on that route. It is to this subject I would call your attention in this communication. It is a matter that has engaged my thoughts for some time.—While the subject was pending before the Legislature, and while legislative action might have been had in the matter, I prepared an article on the subject of making the present works available for the proposed railroad; but was deterred from submitting it to the public eye, lest to some the project might appear chimerical. But as farther reflection has but strengthened me in my convictions of its utility, I have ventured to call attention to the matter.

Of course the materials are not sufficient for an elaborate investigation of the plan.—Nothing but a careful investigation of all the circumstances based upon instrumental examinations of that portion of the public works proposed to be so used, can develop those.—But meagre as are the materials, I think it will not be difficult at least, to show that the matter is worthy of serious attention. The example of a railroad laid upon the banks of a canal is not wanting. We see an instance of it upon one of the banks of the Delaware and Raritan canal, which is occupied for some miles by the railroad line from Philadelphia to New York, via New Brunswick.

The distance from Harrisburg to Hollidaysburg by the line of the canal, is 145 miles, and the lockage or rise in that distance is about 620 feet—by other authorities less. This divided by the number of miles, gives not quite four and a half feet per mile, average. But the rise is more rapid as the canal approaches its termination at Hollidaysburg, being something like 450 feet in the last 38 miles which however is less than twelve feet per mile, average. I have made no allowance for any reduction of distance from that by the present line of improvements, by occasional deviations from the canal, where much saving could be effected in that particular, on which account I might fairly have deducted several miles. All who have travelled by the canal will have in recollection a point on the Eastern Division, where a walk of three-fourths of a mile over a ridge or spur, cuts off a detour by the canal of three miles—but this is a single instance.

A part of this plan is to lay down the railroad upon or the other bank of the canal, as circumstances at different points might make most desirable. It would be necessary to increase the towing path from ten feet, its present width, to that say of fifteen—for single track, which is, I believe, all that is contemplated at present. Culverts, etc., would require to be lengthened to correspond—that is, five feet.

Now let me endeavor to show the difference in cost between this plan and an independent line in the items of grading, culverts, drains, and the like. Take a single instance. An embankment 30 feet in height, 15 feet in width on top, and having the usual slopes of one and a half feet horizontal to one perpendicular, would be 105 feet at bottom, 15 feet at top—in place of an increased width of but five feet throughout; involving, as a few figures would show, but one-twelfth the labor and expense. The same applies to excavations. To adapt a culvert under such circumstances to the increased width, would cost but one-twentieth, there being but five feet in length to construct instead of, say, 100. A person not familiar with the subject, might at the first blush of the matter, conclude that the additional cost would be exactly in proportion to the increased width.

It is true, that I have perhaps, assumed an extreme case—but one that would frequently occur however—for the discrepancy would not be so great between the increased width and cost, if the excavation or embankment

was but five feet. But we see at least, that so to enlarge the cuttings and embankments of the canal, as to obtain a roadway of 15 feet, could never cost more than one-third of what would be the expenditure to obtain the same dimensions in a separate work; for where the cuttings and embankments were but one foot, this would be nearly the case—and varying from that to one-twelfth, as I have shown where the cuttings and embankments are thirty feet. An allowance for constructing the horse path, where occupied by the railroad, will be hereafter spoken of.

But let us proceed cautiously. We will therefore assume that the grading would cost one-third of what would be the expense of an independent line, including viaducts, culverts, etc., under the head of grading. This ratio of expense is particularly applicable, it is believed, to adapting the aqueducts (of which there are 49 upon the two divisions of the canal) to the double purpose; especially as it is possible that the railroad might be passed upon a second story, as is the case with the railroad over the Raritan at New Brunswick. We will put the cost of an independent line at \$30,000 per mile, which is thought to be a fair estimate, for all but the Allegheny Division, where this plan proposes the use of the Portage railroad. It is about the average cost of well constructed railroads in this country, including equipments. If of this sum we set aside \$3000 per mile for the equipments, such as cars, locomotives, depots, water stations, etc., we have \$27,000 per mile for the construction of the road proper. We will set aside \$8000 of this for the superstructure—single track—which will equip the road with a T rail weighing 56 pounds per yard, we have \$19,000 per mile left for grading. Now if we assume that a road bed may be graded and prepared along the banks of canal for one-third of the cost of an independent line, as I have endeavored to show we may, then we require for this purpose \$6333 per mile. Add to this \$8000 per mile for superstructure, and \$3000 per mile for equipments, and we have \$17,333 per mile, total expense. The distance from Harrisburg to Hollidaysburg being 145 miles, we have as total cost of this link in the chain, £2,513,295.

In these estimates I have taken no notice of the fact, and a very important one it is, that the land damages or "right of way" amounting in England—I state it as a curious fact—to \$20,000 per mile, or equal to the entire cost of many of our railroads, would cost a mere trifle; as the line of railroad might, I doubt not, be almost entirely laid within the limits to which the titles have been extinguished by the state, for the purposes of the canal. Under other circumstances, this item, including fencing, could not be put at less than \$1500 per mile. Neither have I taken any notice of the fact that there would be little or no clearing and grubbing, usually amounting from \$300 to \$500 per mile.

I might also urge the facilities which the canal would afford in the construction of the railroad. I will offset these against the construction



of the horse or towing path, at such points as would require it. On embankments this would be unnecessary, as it is already provided in the "heel path."

I do not know whether the same plan is applicable to the western division of the canal, extending from Johnstown to Pittsburg, since it would appear, that by deviating considerably from the line of the canal the distance may be very much curtailed. However, I shall assume for the present purpose that it is, and will endeavor to show at all events, that by adhering to it, a railroad communication may be had with Pittsburg at a very small cost—making the Portage railroad also a link in the chain, as before mentioned.—From Johnstown to Pittsburg the distance by the canal is 104 miles, and the lockage, or descent, 471 feet, or four and one-half feet per mile average, the descent of course being more rapid near Johnstown, but still such as to admit of extremely easy grades.

And here I will take occasion to say in regard to both divisions of the canal, that the lockages usually occur singly—the locks being seldom nearer each other than from a third to a half a mile. If we assume a maximum grade of 45 feet per mile, and put down the average rise at each lock at eight feet, then we would require a plane of but one-sixth of a mile at each lock to overcome the ascent; and the balance would be upon the present level grade on the towing path. And as 14 miles at 45 feet per mile, will overcome the whole ascent between Harrisburg and Hollidaysburg, and as 11 miles at 45 feet per mile will overcome the whole ascent from Pittsburg to Johnstown, it follows, that with the exception of these 25 miles, the whole remainder, consisting of 224 miles, might be upon a dead level. This is an answer to any objections, that might arise to the short curvatures occasionally occurring on the canal, as they could be made to fall upon level grades. Besides, the Columbia railroad presents instances of as sharp curves as occur upon the canal, if I mistake not, viz: a radius, of 350 feet. There are curves of 822 feet radius, which occupy 12 miles in length of that work.

The distance from Johnstown to Pittsburg being 104 miles, as before stated, at \$17,338 per mile, gives us the sum of \$1,802,632, which add to \$2,513,295, and we have \$4,315,927, as the cost of the whole improvement, including cars, locomotives, depots, etc. provided we make use of the Portage railroad, at least for some years. Now let us see why this may not be done.

The Portage railroad is 37 miles in length. The rise from Hollidaysburg to the summit, is 1398 feet, distance 10 miles; and the descent from the summit to Johnstown, is 1171 feet, distance 27 miles. This trip is performed in about four hours, or at the average speed of about nine miles per hour, which is six miles less per hour than the ordinary speed of passenger trains upon the railroads of this country. Now it might well be questioned, whether, if the 2509 feet of rise and fall between Hollidaysburg and Johnstown, could be spread out so as to occupy 39 miles,

at 66 feet per mile—being the grade which the Baltimore and Ohio railroad will have for about that number of miles, if ever completed to the Ohio, as I understand—this would not offer almost as great an obstacle, especially to its freighting business, as in its present shape; when we take into account that as an equivalent for this, we have light grades for the remainder of the distance, and even 224 miles of perfect level.

Now let us look at the amount of business which the Portage railroad can accommodate. Not having by me any information of a late date, I am compelled to consult a report made in 1838, in which this matter is alluded to. It is to be presumed that its capabilities have not diminished since that period—on the contrary we know, that within the last few years, great improvements have been made in the working of inclined planes, both as regards its speed and safety. In this report it is stated, that four cars carrying two and a half tons each, may ascend together; that an equal number may be let down at the same time, and that from six to ten of these trips may be made per hour. Four cars each way, with two and a half tons each, gives 20 tons per trip. Now assuming the smallest number of trips per hour, viz: six, we have 120 tons as the business which may pass a given point in one hour; and 1440 as a day's work, or 864,000 tons, working the road day and night.

Since writing the above, the report of the Canal Commissioners for 1836 has met my eye, from which I extract the following, by which it will be seen that I have underrated, rather than overrated, the capacity of the Portage railroad.

"The Portage railway, however complicated in its operations, is, nevertheless, adequate to the transaction of a vast amount of business. Occupying as it does, nearly a central position on the main line between Columbia and Pittsburg, the capacity of the planes ought to be equal to that of the canal locks, the latter, we know, have never had a demand upon them equal to one-fifth of their capacity on those divisions. Many suppose the planes fall very far short of that limit, and that their full capacity is nearly reached.

"It is however due to our commercial interests and the public at large to state, that the maximum of that limit is very far from being attained. The length of the longest plane is about 3000 feet; the time occupied in moving up or down it, is five minutes, the time occupied in attaching is two and a half minutes, making seven and a half minutes, or eight drafts per hour of three loaded cars, carrying three tons each, making 24 cars, or 72 tons per hour each way," which is equal to 518,400 tons per annum.

"It will be observed by the report of the Superintendent, that the number of cars weighed at Hollidaysburg, and transported from east to west, from April 1st, to October 31st, is 14,900, making a transit of a number not exceeding a hundred per day, but when the business requires it, instead of this number 24 cars can be passed up and the same number down the longest plane in each hour,

making 288 cars in the day of 12 hours, or 576 in one direction in 24 hours; this can be accomplished by using the road day and night, by means of a double set of hands.—This is the true limit of the capacity of the road," viz: 1,036,800 per annum, which approaches the immense tonnage of the Reading railroad.

If we compare this capacity for business with the amount done on the principal freighting railroads of the country, how far it outstrips them. Take the Western railroad, between Boston and Albany, for instance, which in 1844 transported 71,000 tons.

Under these circumstances, why should not the Portage become a link in the chain? Since we find that it can do all that is required of it, and save a heavy outlay that might jeopard the undertaking. Should the project of using the canal banks not meet with the favor I anticipate for it, from any cause, I am confident I shall not be disappointed as to the approbation this part of the plan will meet with, under the state of facts I have shown to exist. It is this portion of the improvement—the passage of the Allegheny mountain, that "so affrights men's souls."—Let it be known that the Portage railroad can be safely made available for this purpose, and much of the difficulty vanishes.

It is not to be presumed there would be any difficulty in effecting the amendments in the charter which this plan, or any portion of it, might make necessary; when we consider the revenue that would flow into the treasury by its adoption. Indeed, if the route by the Juniata should be adopted, it may be worth considering, whether that instrument will not require some amendment, at all events—as the railroad will doubtless require to cross and re-cross the canal frequently, and often run parallel and near to it—to prevent collision between the two interests; which may happen if the rights of both are not clearly pointed out and defined.

As to the expense of working and maintaining the Portage railroad, it appears from the report of the Canal Commissioners, that for the year ending December 1st, 1844, the motive power, trucks, and maintenance of way of the Portage railroad, cost \$135,000; and that the same distance on the Columbia road cost for the same purposes, \$90,187, or but about one-third less.

The following additional statistics of the Portage railroad may be interesting.

The Portage railroad cost about \$2,000,000, or \$54,000 per mile; from this may be inferred the cost of constructing a railroad through this region with easy grades, and without the facility of adapting itself, like that work, to the inequalities of the ground. There are upon the line four viaducts, one of which is 70 feet high, and cost \$54,000; one tunnel 900 feet long, 69 culverts, and 85 drains.—There are 10 planes, five on each side of the summit, with two stationary engines at each; but one however is used at a time, the other being kept as a relay. The height of the summit above the ocean is 2491 feet.

I will close this communication with the following deduction (in part) from the pre-



mises I have taken. If we call the investment in round numbers \$4,500,000; and if we assume a number equal to 150,000 thro' passengers, at \$4; and 150,000 tons of freight at \$6, to say nothing of mail service, etc., we have the following items:

150,000 passengers, at \$4.....	\$600,000
150,000 tons freight, at \$6.....	900,000
Total.....	1,500,000
Deduct as the State's pro rata.....	300,000
Balance.....	1,200,000
Deduct 50 per cent. for expenses.....	600,000

Total net.....\$600,000  
Which is equal to over 13 per cent. on the capital.

The following, which has just come under my notice, as it appears pertinent to the subject, I append. It may be well to add, that the work spoken of is now progressing. "I will also remark that the idea of so appropriating the banks of the canal, was suggested by your correspondent in an article published in the Railroad Journal five years since, with details of the plan and estimates; but the limited means of the company prevented its adoption at that time."

"The New Haven and Northampton canal company have had it in contemplation for some time, and are now concerting measures for an increase of capital to enable them to lay down a railroad on their towing path from New Haven to Westfield and Northampton, 80 miles, and thus bring the travel and transportation of the populous and thriving valley of the Connecticut to New York, by way of New Haven, using both the canal and railroad. The whole length being already graded with the exception of some slight additions about the locks, with the advantage of a canal to transport all the materials for the superstructure, it has been ascertained that the whole can be done with the heaviest T rail for about \$7000 per mile—say \$560,000 for 80 miles! Then it will be tested which road can best afford to carry for low fare, the one that costs only \$560,000, or the one that has cost, or will cost, when completed, one or two millions of dollars! Many persons now express their surprise that the canal company, or the New Haven people, did not sooner avail themselves of the already graded banks of the canal for this purpose."

I am, with great respect, your obedient servant,  
FRANKLIN P. HOLCOMB.

#### New York and Erie Railroad.

We have received the following call upon, and statement to, the shareholders of this road. In giving place to this communication, we cannot refrain from the free expression of our opinion of the efforts and deserts of the directors and officers of this company. Coming into this place, and the management of its affairs, as they did, when its sun of prosperity was under an almost total eclipse, and bringing it, as they have, into a state of prosperity and active progression, they merit—and if the people of New York, and the Southern tier of counties, and the West can appreciate a generous devotion to the public interest—they will receive rich rewards in a just estimation of their labors.

It is no new thing for us to say that, to the city of New York, it would be true economy—could it not

be otherwise built—to build it by a tax upon the property of the city—rather than not to have it done; but, by the energy and perseverance of those who have had its direction during the two past years, doubts have been dispelled, and renewed confidence inspired in the minds of those who are to be benefited by its early completion; and we desire again to bear our testimony warmly in favor of, and to cheer on, those who deserve so much from their fellow citizens. The call referred to is as follows, and we trust it will meet with a prompt response from all to whom it is addressed.

*"The Stockholders of the New York and Erie Railroad Company are hereby notified that an instalment of ten dollars per share on all shares on which the payments already made do not exceed twenty-five dollars, is required to be paid at the office of the company, No. 45 Wall street, on or before the 12th day of January, 1847."*

*By order of the Board of Directors.*

*NATHANIEL MARSH, Secretary.*

*"N. B.—Subscribers at or near Newburgh, are requested to make payments to Thomas C. Ring, Esq., Cashier of the Poyell Bank."*

"The above is a copy of a call for a further instalment of ten per cent. And in making this call, the Board of Directors have considered it due to the Stockholders that they should be kept fully advised of the condition and prospects of the Company, and to that end submit the following:—

"All the preceding calls made by the Directors have been very generally responded to by the subscribers, and 25 per cent. has been paid on an amount beyond 3,000,000 dollars; a considerable number have paid a much larger per centage in advance, and many have paid up in full.

"The interest on the instalments, and on all other indebtedness of the Company, has been paid semi-annually, agreeably to the terms of subscription; and in accordance with the views set forth in the address of the Directors, at the time of opening the Books for subscription on the 1st September, 1845, it has been paid out of the net earnings of the road, leaving a surplus to carry to next year's interest account.

"From 9 to 10 miles of as heavy and expensive a portion of the work as any of like distance to Lake Erie, (viz: from Middletown to Otisville,) was added to the main line in the month of October last. The grading from that point to Binghamton, a distance of over 140 miles, has been put under contract on very favorable terms, and much below the Engineer's estimate, and will be finished during the ensuing year. The contractors are now at work on the heaviest and most difficult parts of the line, both in our own State and in Pennsylvania, and the whole work will be urged forward as rapidly as a proper regard to economy and prudence will permit; the Directors hoping to be able to extend the road to Hornellsville, nearly simultaneously with its completion to Binghamton, or at the farthest, by the 1st January, 1849—or within two years from date.

"A contract for all the iron rails required for the whole distance to the place last named, has also been made on very advantageous terms.

"The Stockholders having been heretofore informed of the reasons which have delayed a more rapid prosecution of the work, it may suffice at this time to state that the whole line from Otisville to Binghamton, a distance of 140 miles, was for a long time under the control of the Commissioners, until by their recent decision in favor of the best route to Lake Erie, they have settled a very important question which has embarrassed the company for years.

"By this decision a most favorable line has been obtained, in addition to which the Directors have determined to alter and improve the grade beyond Binghamton, at the few points where it is required, which is considered by the Engineers perfectly practicable, and at very little expense; when the grade or line will stand thus:—From Dunkirk on Lake Erie, coming east towards the Hudson River, for the first 14 miles, the maximum grade will not exceed 60 feet to the mile;—from that point to Hornellsville, a distance of 114 miles, the grade will not exceed 30 feet to the mile;—from Hornellsville to Port Jervis, 250 miles, the whole distance is level, descending, or not exceeding five feet to the mile, except at one point, where an ascending grade of 60 feet to the mile is met with for a distance of 8 miles, being the high land between the Susquehanna and Delaware Rivers; at which point a heavy train of cars would require an extra or assisting engine, with which assistance a continuous line of 250 miles would be rendered practically level. From Port Jervis, ascending the Shawangunk mountain to Otisville, a distance of 11 miles, the grade is but 45 feet to the mile. With the road now in use from Otisville, (the present terminus) to Piermont, a distance of 62 miles, the Stockholders are doubtless generally familiar.

"Thus it will be seen that a better grade has been obtained for this great work than its most sanguine friends ever anticipated, the value and importance of which to this city and the southwestern counties of our State, can hardly be estimated, and can only be measured by millions of dollars, when the business of a series of years is taken into account.

"It is further believed that if anything can compensate the people of the Southwestern counties, and those also of our own city, for the great injury they have sustained by the long delay in the construction of this important work, it will be found in the improved character of the line above referred to.

"At the time of opening the Books for subscription, the Directors deemed it expedient, if not absolutely necessary, to success, that interest should be paid on the new subscriptions, believing that the net earnings of the road would provide for such payment, leaving the subject of paying interest on the old stock an open question. Since which time unceasing complaints have been made,



and much dissatisfaction expressed at the Directors declining to pay interest on the old stock. The consideration of the question having been postponed as long as a proper and prudent regard for the true interests of the company would permit, the subject was recently taken up by the Board, and after a very full and careful examination, it was determined to pay interest on the old stock from the date of completion of the road to Binghamton, and upon the same principle, that it was determined to pay interest on the new subscriptions, viz: out of the net earnings of the road, believing that when the road shall be extended to that point, that the net earnings will provide for the interest on both classes of stock; in which case they consider they would have no right to withhold it. If the limits assigned to this circular would allow a full statement of all the reasons which influenced the Board in such determination, it is believed their decision would meet the approbation of every Stockholder in the Company.

"The earnings of the road are steadily and permanently increasing, and every additional portion added to the main line, lessens the active competition between it and the Hudson river, from which, as it will be seen by reference to the map, it very gradually diverges from its commencement at Piermont to Middletown; but from which latter point westward, there will be little or no competition for the trade of the South-western Counties of our own State, and also that of all the Northern tier of Counties of Pennsylvania, extending on a line parallel with the road, a distance of nearly 400 miles, and which, by their position, will necessarily be dependent on this road for a communication with this city, and without taking into account the business of the rapidly extending West, with its great inland seas, it is difficult to conceive with an outspread map before us, of any portion of our country through which a railroad could be constructed which would draw to it the trade of such an extensive and valuable portion of the country, and so abundant in resources and substantial wealth.

"It may not be improper here to add, that from the time the present Board of Directors assumed the control of this work, they have disincumbered it of a vast amount of difficulties and embarrassments, and placed it in a condition to deserve, as they believe, the entire confidence of the Stockholders and the public; and when it is further considered (and it will bear repetition), that in addition to the great natural advantages of this work, is added the release of the State lien of \$3,000,000, and the reduction of the old stock to half its par value, thus forming a bonus of more than thirty per cent. on all the stock of the Company, it is doubtless safe to state that no railroad stock of our country ever presented, or will be likely hereafter to present, greater inducements for a safe and permanent investment.

"By order of the Board of Directors,  
NATHANIEL MARSH,  
Secretary."  
New York, January, 1847.

#### The Railroad Interest in Maine.

The accounts from the state of Maine, give evidence of a lively interest being exhibited in that quarter, in regard to railroads. The citizens of Bath, Augusta, Gardiner, Hallowell, etc., are up and doing—and the prospect is, that important results will be accomplished—if the spirit shown at the late public meetings, can be taken as an earnest of the disposition of the people there. We learn from the "Yankee Blade," that a great mass meeting of the citizens of Hallowell, Augusta and Gardiner, was held at the town hall in the first named town, on Saturday last, for the purpose of taking more active and energetic measures in regard to the Portland and Kennebec railroad. The people turned out in great numbers, both in the forenoon and afternoon, and eloquent and enthusiastic speeches were delivered, which were listened to with the deepest interest. Among those who addressed the meeting were Rev. J. W. Bardbury, Hon. Reuel Williams, Hon. David Bronson, and Rev. W. A. Drew, of Augusta, Hon. John Otis, of Hallowell, and R. H. Gardiner, and Park Sheldon, Esq., of Gardiner. A degree of zeal, spirit, unanimity and enthusiasm was exhibited, such as has never before been witnessed among us, and on all hands there was felt to be an absolute necessity of adopting the most vigorous measures, and that—*immediately!*—Mr. Otis, one of the directors of the railroad, reported that the aggregate subscriptions for the road, now on the books, amounted to \$478,000—and that, in all probability, the amount would soon be raised to \$800,000. The following strong resolutions were passed. It will be seen by the last particularly that the people are wide awake for the enterprise, and are determined that its prosecution shall lag no longer.

This is managing matters in the right spirit. A series of resolutions were proposed and adopted—from which we call the following as specimens:—

*Resolved*, That the time has arrived when the public interest demands the opening of a grand channel of railroad communication, connecting the valleys of the Kennebec and the Penobscot with Portland and Boston; and that it is the sense of this meeting that such road should pass through Brunswick, Gardiner, Hallowell, and Augusta, to such point on the Kennebec river, in Waterville or Fairfield, as shall best secure the public accommodation, and the facilities of crossing the Kennebec in its extension to Bangor.

*Resolved*, That we regard this road as the commencement of a system of railroads, running far up the valley of the Kennebec, and connecting with Bangor, branching off at various points, so as to accommodate every part of the interiors of the counties of Kennebec, Franklin, Somerset and Penobscot, developing the resources, and increasing the wealth of the country through which it shall pass.

*Resolved*, That the subscriptions already obtained to the Kennebec and Portland railroad, together with the sums pledged to be taken and in a short time to be realized, do, in the opinion of this meeting, fully authorize the directors to take immediate steps to put the whole line under contract to Augusta, with the branch to Bath.

*Resolved*, That the towns of Augusta, Hallowell, Gardiner, Bath, and Brunswick, have the ability to invest at least \$800,000 in the road, and that the interests of those towns imperiously demand that it be done.

Railroad meetings appear to be the order of the day in every direction, in that region, and the disposition appears to be to push matters on with vigor. The Skowhegan Press says that subscription papers are in circulation, for subscribers to the stock in the Waterville and Lewiston road, and something like \$5000 have been taken by individuals in the two villages of Skowhegan and Bloomfield.

The residents along the proposed routes from Portland, eastward, are actively engaged in pressing the

subject upon the people generally, and we are happy to see that it has excited a deep interest among all classes there—the merchant, the manufacturer and the farmer, as well as the capitalist.

#### Wolfe Island, Kingston, and Toronto Railroad.

The Kingston (U. C.) Gazette says, "it will be remembered that a few months ago, our talented and respected fellow townsman, Charles Stuart, Esq., proceeded to England on behalf of the acting committee of the Wolfe Island, Kingston, and Toronto railroad company, for the purpose of taking up a portion of the stock in London, and also with a view of urging upon the Government the necessity of giving without loss of time the royal assent to the Provincial Act incorporating the said company. About the 20th of October last, Mr. Stuart had an interview with Lord Grey, the colonial secretary on the subject, when he strongly urged upon him the propriety of the royal assent being given as soon as possible, and though his Lordship then seemed to throw various obstacles in the way, yet it is now gratifying to find by the Official Gazette of Saturday, that our bill with all the others passed last session, have received the royal assent;—we make the following extract from the proclamation in the Gazette:—

Now Know Ye, that the aforesaid Bills, respectively intitled, "An Act to incorporate a Company to extend the Great Western Railroad from Hamilton to Toronto," "An Act to amend an Act passed in the fifth year of Her Majesty's reign, intituled, An Act to amend an Act passed in the sixth year of the reign of His late Majesty King William the Fourth, intituled, An Act to incorporate the City of Toronto and Lake Huron Railroad Company," "An Act for erecting a suspension bridge over the Niagara River at or near the Falls of Niagara," "An Act to restore the rights of certain persons attainted for High Treason," "An Act to incorporate the Wolfe Island, Kingston and Toronto Railroad Company," "An Act to incorporate the Petersboro' and Port Hope Railway Company," "An Act to incorporate the Montreal and Kingston Railroad Company," having been laid before Us in Council, on the Thirtieth day of October, now last past, we have been pleased to assent to each and every of the same; and we do by these presents and according to the provisions of the said Act of Parliament of the United Kingdom of Great Britain and Ireland, passed in the third and fourth years of our reign, assent to each and every of the aforesaid respective bills; of all which our loving subjects, and all others whom these presents may concern, are hereby required to take notice, and to govern themselves accordingly.

#### Northern Railroad.

A section of this important road was opened last week, from Concord to Franklin, N. H. Thence, it is to proceed north westerly to Lebanon, near the mouth of White river in Vermont, where the parties have already agreed that it shall connect with the Vermont Central. At the festival on the opening, Mr. C. T. Russell, one of the Directors, made the following statements on the aspects of the enterprise.

To-day, he said, we had seen 19 of the 68 miles completed. The part completed had cost \$25,000 per mile. Forty-nine miles remained to be done, all of which was under contract, including the bridge over the Connecticut at the mouth of White river. Two-thirds of the grading had been completed, needing only the dressing to be ready for rails. A section of the road immediately beyond Franklin would be opened in the spring. The principal difficulty was the removal of 28,000 cubic yards of rock at Orange, the summit, which would be completed in August, and the whole road would be traversed by cars as early as the first of November next.



Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

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### AMERICAN RAILROAD JOURNAL.

Published by D. E. MINOR, 105 Chestnut St., Philadelphia.

Saturday, January 16, 1847.

✶ We ask the attention of our readers to the following notice:

#### NOTICE TO RAILROAD CONTRACTORS.

Proposals will be received by the Subscriber, at the office of the Michigan Central Railroad Company, at Detroit, until the 16th day of February next, for Grading the first thirteen miles of the Extension of the Michigan Central Railroad, from Kalamazoo, westward; said thirteen miles contains about four hundred thousand cubic yards of earth work. Plans and Specifications will be ready for examination at the office of the subscriber after February 1st.

J. W. BROOKS, Supt. & Eng.

Detroit, January 5, 1847. 513

#### Index to the Last Volume.

This useful and necessary appendage to the Journal, for last year, will be ready in a short time and forwarded to each subscriber.

#### Table of American Railroads.

The difficulty of completing this interesting document, has been such as to delay it much longer than we anticipated. It will, however, be completed at the earliest possible period, and forwarded with the Journal.

#### Railroad Iron.

In accordance with our suggestion a short time since, in the Journal, a bar of railroad iron from the new mill of Messrs. Reeve, Buck & Co., Phoenixville, has been deposited at our office, in the FRANKLIN HOUSE, for the inspection of those who are interested in such matters. It is a beautiful sample of the rail, eighteen feet long, weighing sixty pounds to the yard. There is also the flag-end of a bar, broken to show the quality of the iron, which is pronounced, by good judges, a superior article, and we invite all those interested in the construction of railroads, or in the manufacture of iron, to call and look at it.

#### Phoenixville, Pa.

This interesting village is located on the Schuylkill and Reading railroad, about 25 miles from this city. Its importance is chiefly derived from the ironworks of Messrs. Reeve, Buck & Co., and a cotton mill of considerable extent. But that which is most interesting to the visiter is the manufacture of iron, from the raw material, into the various shapes in which it is placed in the market. Here the ore, with the coal and the lime-stone, is placed in the furnace and run into "pigs." Thence it is carried to the puddling furnace, again heated, and after "bringing it to nature," is "balled," squeezed into shape, rolled into bars, cut, piled, re-heated and rolled into railroad bars; or, into merchant bars, or

sheets, from which about 1000 kegs of nails are manufactured and packed every week. The manufacture of rails is, however, the most important, and when we take into consideration the extent of the works, the quantity and expense of the machinery, with the number of workmen, and the skill and labor required, we think the proprietors entitled to much credit for their enterprise and perseverance. In the entire establishment about 500 men are employed, and when we add the colliers, the miners, and the carriers, we think the "industrial classes" will look upon the iron business as one of the important interests of the state.

#### The Prospect.

At the last accounts, there needed the subscription of but a few hundred shares to the capital stock of the Pennsylvania railroad, to obtain the charter.—The citizens of Philadelphia have evinced their confidence in this great work, by coming forward and subscribing generously to the stock, and the result will show that the people in this vicinity have not lost sight of the important advantages which attach to this project. We are among those who feel confident that this line of railroad must prove very profitable as an investment—and we cannot but believe that this route will bring to the city of Philadelphia, an immense amount of additional trade from the interior, as well as the west, which is now drawn from it, by other main channels of conveyance from Ohio, etc., to our Atlantic borders. *Let the work go on*—and let us have a good road, well constructed and well appointed—and but a few years will elapse before the city of Philadelphia will feel the influence of its establishment, as Boston has, since the completion of the Great Western road.

#### Magnetic Telegraph.

This important invention is likely to become a very common means of correspondence and communication all over the country. The board of trade of Montreal have taken the subject in hand, and will petition government to erect one from Montreal to Halifax. Thus giving the first news by the English steamers that touch at that point on their way to Boston. In that case we should get the first intelligence from Europe by way of Canada.

Another line is recommended to Portland, passing along the line of the railroad now building from Montreal to that city. Another line is contemplated from Montreal to New York, intersecting at Saratoga. The line from Toronto to Montreal, passing through Kingston, will also be built. There is already one from Buffalo to Toronto.

The Pittsburg Gazette of the 31st ult., states that the poles of the Pittsburg, Cincinnati, and Louisville line of telegraphs were being put up, commencing at the corner of Fourth and Smithfield streets, and proceeding towards the Monongahela bridge, over which it is to be carried.

The Baltimore Sun states that books are open in that city for the subscription of stock for the telegraph line from Washington City to New Orleans, via Charleston, S. C. The stock in the line from Baltimore to New York, has netted full twelve per cent on the cost of construction, including the stock given to the patentees. This makes the net income on the actual outlay for the road 24 per cent. "despite all the delays and accidents incident to a new invention." It is proposed to finish the line to New Orleans in four months.

The projectors of the Philadelphia and New Orleans magnetic telegraph, have made an estimate of the expenses and the profits of their line. They judge that by constant operation during the 24 hours

each day, it would earn at the rate of two dollars for each fifteen words, superscription, etc., \$1,440, or \$449,280 in a year. The gross expenses are estimated at \$63,000 for the year, and the cost of construction \$300,000.

We saw and conversed with Mr. Eliphalet Case, Jr., a few days ago, who is interested in the line from Pittsburg to Cincinnati. From him we learn that the best prospects promise, in relation to the establishment of the telegraph, upon that line—and we now learn from the Cincinnati Gazette, of a late date, that Mr. C. has returned there, from his visit to the east, and has obtained from the patentees to himself and his associates, a legal transfer of their right to construct a line of telegraph from Cincinnati to Pittsburg; to Lake Erie, to Louisville, to St. Louis, and to New Orleans, via Nashville, and arrangements are making to construct these lines with all despatch. It seems from this conveyance that the proprietors of the patent do not recognize any other authority to construct any of these lines. The business is entrusted to good hands, and Mr. Case's business reputation is ample guaranty that the work will be "put through" with all practicable despatch.

#### Railroad Matters.

The Utica and Schenectady railroad is to be relaid early the ensuing spring, with rails heavier and more substantial than any hitherto used in this country. The grading is now good, the fare has been made reasonable—a little over two cents a mile—and when the new rails are laid, there will be nothing more to be desired. We have a profound conviction, says the Rochester American, that the interests of the several railroad corporations, no less than that of the public, requires such renovation and improvement as are undertaken by the enterprising Utica and Schenectady company. Heavy rails and good grading will ensure cheap fares and large profits.—This is all which can be desired either by the stockholders or the community. The above-mentioned road passes through a valley of extraordinary natural beauty, along which a great current of travel must always go.

The Detroit Free Press states that on the 24th of December, ult., the Michigan Southern railroad company paid to the state treasurer, the second instalment required by their charter for the purchase of the Southern railroad. On the same day the agents of the state started for Monroe for the purpose of transferring the road to the company, and to-day we presume the road will pass from the state and be vested in the company. The amount paid by the company, so far, is \$50,000, leaving \$450,000 to be paid in instalments hereafter. The terms of the sale require the prompt finishing of the road, and the advantages to the fertile portion of the state through which it will pass, must necessarily be very great.

On Tuesday last, the County Commissioners viewed the several highways and town-ways over which the Cape-Cod Branch railroad will cross in Sandwich; and the next day, at their meeting in Barnstable, they authorized the corporation to cross said highways and town-ways with the road upon a level. The corporation, however, must construct in the Town Neck lane, a safe passage way, 15 feet wide, and six feet high, under the road, for the cattle to go to Town Neck.

The Baltimore and Ohio railroad company have in use an engine of 25 tons, which, with the aid of a newly constructed snow plough, that is said to have cost only \$50, carries a heavy train up a steep ascent, through snow drifts eight and nine feet deep.



When the line is completed between Berwick and Newcastle, the journey from Edinburgh to London will be a matter of fifteen or sixteen hours. Little more than a century ago, the following notice was given: "9th May, 1734.—A coach will set out from Edinburgh towards the end of next week for London, or any place on the road. To be performed in nine days, being three days sooner than any other coach that travels the road; for which purpose eight stout horses are stationed at proper distances."

The Cincinnati Gazette informs us that the following named gentlemen were, on the 15th December, elected Directors of the Little Miami railroad company for the ensuing year, viz: Jeremiah Morrow, John Kilgour, Jacob Strader, John Kugler, Samuel Barne, C. Williams, R. R. Springer, G. Taylor, S. Hittling, N. Wright, R. Brachman, W. McCammon. At a subsequent period, the new Board organized by the election of Jeremiah Morrow, President, and Clark Williams, Secretary. At a meeting of the Board held at the office of the company in that city, a dividend of five per cent. was declared out of the profits for the past year, payable in the stock of the company, to all stockholders who had fully paid up their subscriptions previous to the 1st day of July last. On all stock paid up subsequently, a dividend was ordered to be paid pro rata from the first day of each month following the period of such payment.

The people of Bath and the Kennebec towns generally are pushing forward vigorously the project of a railroad from Portland to Augusta, with a branch from Bath to Brunswick. The road is intended ultimately to be extended to Waterville, and from thence to the Penobscot.

An application will be made to the legislature for a charter for a railroad from Lee, Mass., to Housatonicville, to intersect with the Housatonic railroad. We learn from the Pittsfield Sun that a meeting was held at Lee on the 28th ult., at which a report of a survey was made, which represented the route as very feasible. The cost is estimated at \$500,000.

#### Coal Trade—Shipping—and other Items.

The Reading railroad company sent 1,233,561 tons over the road last year, being only 16,438 tons less than the managers estimated the capacity of the road. The quantity sent to market from all the regions in 1846, is in round numbers 2,334,000 tons, against 2,053,633 tons in 1845, being an increase in 1846 of 312,000 tons. This is an immense business, but nothing to compare with what the Reading railroad is destined, ere long, to attain, in the transportation of coal. During the week ending Saturday, 2d inst., says the Cumberland Civilian, nearly 1,000 tons of coal were sent by the Maryland mining company on the Baltimore and Ohio railroad to the eastern markets, notwithstanding the intervention of the holidays.

The Geneva Gazette says that the statement of the business of the collector's office, in this village, as prepared by our attentive collector, Col. Bogert, presents a gratifying account of the trade upon our lake and canal. The amount of tolls received at the office is more than \$8000 greater than that received last year, notwithstanding that there has been a considerable reduction in the rates of tolls on the bulk of the article.

BENJAMIN KINGSBURY, JR., the surveyor of Portland, furnishes a list of the vessels, with their class and tonnage, which have been built and registered in the district of Portland during the year 1846.—The district includes the towns of North Yarmouth, Brunswick, Freeport, Harpswell, and perhaps some

others. The total amount of new vessels is 49, viz: three ships, twenty-two barques, fourteen brigs, eleven schooners and one sloop, the tonnage of which is 10,467—an increase over last year of 2171 tons. Three barques and one schooner were built for Boston, and one barque for New York.

The proposition to establish a line of steam packets between Richmond, Va., and New York, has been revived, and a petition presented to the Legislature of Virginia, to incorporate a company for this purpose.

The New York Tribune states that the contract for the second ship of the steam navigation company was made on Monday, and next day preparations for the getting up the frame work were commenced. The first ship will be launched about the 15th prox. We are very glad to learn that the subscription to the stock of this company is going on favorably, and that it only falls short \$76,000 of the amount needed—500,000. This will probably be taken within a week or two.

A new mill-pond, covering 80 acres, has lately been formed at Cabotville, Mass. The power acquired by both dams is estimated to be sufficient to carry from 80,000 to 100,000 spindles. A few years of prosperity will doubtless witness the rise of a village of 8,000 to 10,000 inhabitants, where, until within a few years, the solitude has been almost unbroken, since the red man roved along the banks, or darted his canoe across the waters.

A memorial is to be presented at the coming session of the Legislature of N. York, for a canal upon the south side of Long Island. The project is to unite and make navigable the several bays upon the south side, from Riverhead or Southampton, to Coney Island.

The type-setting machine noticed in our columns last week, as having been successfully introduced to work in the office of the New York Sun, seems to be an old affair, which was abandoned some years ago in England. The New York Herald of the 27th ult., makes the following reference to it:—

"Some of the daily papers of last week have brought this machine before the public as a great wonder. But unhappily it is neither that nor a novelty, nor a dangerous competitor to type-setters.—It was known long ago in England, and has been tried in Clowes' printing office, in London, where it has been demonstrated that its application to practical purposes offers no pecuniary advantage or economy, though it can set up a large quantity of type; it takes as much time to fill the canals again with type as it now takes to set them up by hand, and the setting up with the machine gives occasion to so much disorder and pi that Clowes found it a losing experiment, and returned the steam type-setter to its inventor."

#### "Parallel Railroads."

Under the above caption, the Rochester Democrat remarks that "the construction of a railroad on the line of the canal from Rochester to Syracuse, is again the subject of agitation in the towns on the proposed route. The presses at the points most interested speak warmly in favor of the measure, and those who are most active in the agitation feel quite confident that the work will eventually be constructed. In regard to the expediency of this work and its prospects of success, as well as the effects upon the interests of the state, we are, after a full investigation of the subject, constrained to differ from those who are taking measures to urge it forward. In the first place, we have no faith that the capital can be raised. We judge so from the fact that the state, within the last five years, has authorized the construction of some fourteen or fifteen railroads, all of them on important routes, none of which have been

touched beyond partial surveys. The citizens of Buffalo have subscribed liberally to the Attica and Hornellsville road; but there is very little prospect that it will be built immediately. If capital cannot be procured for these works, where shall we find the sum necessary for the construction of a line that will have to compete with the canal as well as the line already in operation? It surely cannot be raised along the route, and the course of our legislature in reference to railroads, claiming the right to regulate fares and reduce profits at pleasure, however just such interference may be deemed to be, will effectually deter eastern capitalists from investing in New York enterprises.

"A number of weighty objections present themselves against this enterprise—objections that have received additional force from the discussions in the various papers favorable to the project. The friends of the route claim that their work, if constructed, will reduce the rates of fare so low that all the travel will be diverted from the canals to the railroads.—So far as the travelling public alone are concerned, this might prove a benefit. But the canal interest is the great interest of the state. It gives employment to thousands where railroads do to tens; and renders profitable large investments in boats, packets and warehouses. In time it will contribute largely to the ordinary expenses of the state, and relieve the people from general taxation. A large debt is now upon its hands, and the work of enlargement—a work all important, by the side of which railroads dwindle into insignificance, is also thrown upon its resources. The friends of the canal—and they comprise five-sixths of the people of Western New York—will never consent that this great work shall be crippled for the benefit of the travelling public and a mere corporation."

We agree entirely with the editor of the Democrat in most of his views as given in this article, but not in his opinion of the value of railroads.

#### Manufacture of Plate Glass in England.

The Mining Journal states that perhaps there is no one article, the produce of the manufactures of the isles of Great Britain, in which there has been, for the last thirty years, so much room for the investment of capital, in competition with those who held the trade in their own hands, as that of plate glass. The statistics of this manufacture show some extraordinary features—always having a demand far beyond the power of the makers to supply, enormous profits have been made; and it is a well-known fact that one house, in 1845, the year of the total repeal of the duty, made in twelve months a profit of £30,000 on a paid-up capital of £125,000, or very nearly 25 per cent. per annum. Notwithstanding the increasing supply annually, since 1819, the demand has increased in a greater ratio; in that year the manufacture was 3000 superficial feet per week, of indifferent quality, with no complaint as to the supply; in 1827 it was 5000 feet, considerably improved, but inadequate to the demand; in 1836 it was 7000 feet, improved, but still insufficient; and in 1844 it had risen to 23,000 feet per week, still improving in quality, but the supply more inadequate than ever. In 1819 the average price for all sizes was from 20s. to 25s. per foot, and is now from 5s. to 6s. per foot. Large plates—say 144 inches by 75 inches—could not be manufactured till about the year 1836; they are now made with facility, and sold at 35s. 7d. per foot, while French plates, made at St. Gobain, free of duty, cannot be obtained of that size under 67s. 11d. per foot. There are still only seven houses engaged in this manufacture; the sales



average 45,000 feet per week; and the demand is so on the increase, that the works are kept in constant operation, some of them day and night. The duty remitted in 1845 amounted to about forty per cent. on the cost price—while such reduction has only benefited the consumer to the extent of fifteen per cent.; and even at these enormously increased profits, as we have before stated, the demand far exceeds the supply.

#### Awful Neglect and Accident.

We are particularly pained to day, to record the details of one of the most shocking accidents it has ever been our lot to know in this country, which took place upon the Reading railroad, on Thursday evening last. The explosion occurred just beyond the Mill creek bridge, a little way above Manayunk, some nine or ten miles from this city—by which seven beings were immediately killed—not one of the whole number present, being left to tell the story! The locomotive attached to an empty coal train, bound up, exploded with a dreadful crash, at the spot we have named above, destroying the engine, tender, etc., and blowing to atoms the persons who were unfortunately upon the cars. The "Spirit of the Times" gives the following terrible particulars in relation to this melancholy accident.

The cause of the explosion, says that paper, is, of course, enveloped in mystery, and can only form the subject of conjecture. The most rational conclusion is that the water was allowed to get out of the boiler, and when the flues were perhaps red hot, the water was let on. Gas being thus rapidly generated produced the explosion. The boiler exploded upwards and outwards, throwing the driving wheels out each side, tearing the engine to pieces, staving in the tank, wrecking the tender, damaging half a dozen of the cars—and producing altogether, it is believed, the most frightful wreck of the kind ever beheld. The terrible result that ensued was never equalled. The body, or rather the trunk of the body of one of the brake men was thrown up a hill, the distance of at least two hundred and fifty yards. Beside, or near him, were two pieces of iron from the boiler, weighing two or three hundred pounds each, that were found indented some two and a half feet into the ground. Another body was found upon a small island of ice in the stream, that had been blown through a large tree, in the limbs of which parts of the clothing were hanging. The body supposed to be that of the engineer was discovered driven into the water tank. Sticks of wood were forced thro' it, and from this circumstance, it is thought that the unfortunate man must have been either on or near the wood-pile, or it may have been, was in the act of handling the billets at the moment of the accident. One man was blown up the hill and his body being doubled up, was sent through a fence, which it carried with it. A body was found with nothing on it save a scarf around his neck; others with only pieces of the flannel shirt. Out of the seven bodies, there was not more than one that was whole enough to be recognized with any certainty. All were stripped entirely of their clothing, except here and there a remnant that clung to some portion of them. The head of one of the men was found mashed to a jelly, another was found

separated from the trunk, and an arm was picked up in a field with a tin cup in the hand. The corpses were all horribly mutilated, torn, burnt, and blackened.

The report of the explosion was tremendous. It was heard a great distance, and the concussion shook the windows at the Falls of the Schuylkill, four miles from the scene. The locomotive was an eight wheel one of the largest and finest description, and was named "Never sink." The collecting of the bodies yesterday was a melancholy and distressing sight; the most affecting part of which was an aged father bending over and bathing the corpse of his son.

The agents of the company at this end of the road, immediately on the receipt of the intelligence of the accident, proceeded to the scene of the disaster, and were untiring in every exertion that humanity dictated.

#### Commerce of the Canals.

The Albany Argus has prepared, from official sources, a table of the commerce of the canals of the state for the past season. It presents a very gratifying result of the year's business, and exhibits in strong colors the wealth of that state and of the west.

Accompanying the table showing the movement from and to the Hudson for the past season, is a similar one of the movement for the season of 1845.

It is shown that there is an increase in the tonnage of 172,579 tons, and of \$14,826,461 in the value of the property transported, and the excess both in tonnage and value over previous years is still greater.

The value of the entire movement of property from and to the Hudson, is still greater by \$4,490,353 than the exports of the United States for the fiscal year ending July, 1844, and greater by \$7,297,845 than the value of the goods imported into the United States for the same time.

These facts speak volumes in favor of the importance of this commerce, not only to that state, but in a national point of view, as worthy the attention of the general government.

#### Plank Roads.

The subject of plank roads seems to have excited a good deal of attention latterly. The Syracuse Journal of a late date, remarks that the one constructed last year, in that county, has "satisfied every person who has travelled on it, of its vast superiority over any other road in the country. We are permitted to publish the following letter to the Hon. John Stryker, of Rome, from the Engineer of that road, as applications are continually made to him for information on the subject."

The following letter from Geo. Geddes, Esq. C. E. upon this subject, will be read with interest. Mr. G. is very favorably known to the railroad community—and he is eminently well qualified to offer information upon this subject. We learn that Mr. G. and Mr. Alvord of Salina, were the principal managers in constructing the plank road from Salina to Brewerton.

"They visited Canada together"—says the Rochester American, "previous to the commencement of this road, examined several, consulted with experienced gentlemen connected with enterprises of this character there, and then returned with a general knowledge, and made their estimates and commenced operations. Some months ago we had

the pleasure of an interview with Mr. Geddes, and were both astonished and gratified by his statements of the complete success attending plank roads, wherever tried. He was firmly of the opinion that a system of such roads radiating from this city as a centre, into the rich country which surrounds it, would very greatly increase its wealth and business, as well as prove highly profitable to the stockholders. We commend his article to the attention of the public. The draft of a proposed act, therein mentioned, we omit, as not of such general interest."

FAIRMOUNT, ONON. CO. N. Y. )  
December 24, 1846. }

JOHN STRYKER, ESQ., DEAR SIR.—Your letter of the 22d inst. came to hand yesterday. You say that it is proposed to make plank roads in two directions from Rome, and that you understand that I am "fully informed as to the cost, manner of construction, etc." and you ask me to communicate to you such information as may be useful to you.

I have twice visited Canada to procure information upon this subject, and as you probably know, during the past year, I have had charge, as Engineer, of the construction of the Salina and Central Square plank road, twelve and a half miles of which are finished and now in use. Any information that I have acquired by my examinations and experience is at your service; and so far as I can, in a letter, I will state what appears to me to be important to the objects you have in view.

By the new constitution, general laws are to be passed providing for the creation of corporations for such purposes as making plank roads; and, in my judgment, the first thing is for all the friends of plank board projects to unite, and procure the enactment of such a law by the Legislature, at an early day of the next session. At the suggestion of various gentlemen, I have drawn up a law, which, in my opinion, will give all the powers necessary to the companies organized under it, and amply protect the public and the owners of land from injury. A copy of the proposed law I will send you.

The mode of construction of a plank road is the point upon which you are most desirous of information.

In case it is expected that a very great amount of travel is to pass over the road, two tracks, each eight feet wide, will be required; but it is not probable that any road coming into your town will require more than one track; at any rate for more than a few miles out of town. It is difficult to persuade a man, who has not seen the thing tried, that one track is entirely sufficient, except in cases of an extraordinary amount of travel; but it is so, and the road out of Salina, has but one track, except over places where proper earth could not be obtained with which to make a road along side of the plank. Over the light sand plains, where, in dry weather, a wagon would cut into the sand, we laid two tracks, but over clay or common earth, we laid but one; and during the very rainy autumn just past, our road



has constantly been in good order for teams to turn out.

In case there is so much travel that common earth cannot be kept in good order for turning out—then the tolls paid by that travel will compensate for the cost of the second track; so that the interests of the public and the owners meet, and the thing will regulate itself. If the second track is required, then its cost will be a good investment.

There is another particular in which the public interests, and the interests of the owners go together—the tolls. The character of the Salina road allows the Directors to regulate the tolls within certain limits; in summer we exact three-fourths, and in winter one-half the sum allowed us from vehicles drawn by two animals. It is our interests to encourage such an amount of travel as to insure the wearing out, rather than the rotting out of our timber, and by taxing the travel lightly, we increase the amount.

The track is laid on one side of the road, so that teams coming into town keep it, and teams going out yield it in passing. The tonnage being chiefly in one direction, it is generally the unloaded teams that have to do all the turning out.

The plank are of hemlock, eight feet long and four inches thick, laid crosswise of the road, on sills four inches square. The earth is broken up and made fine, the sills are bedded into it, and the surface graded smooth; the plank are then laid on the sills, care being taken that the earth is up to and touches the plank at every point. This is important, for if any space be left for air under the plank, or along side the sills, dry rot follows. I saw, in Canada, a road that had been worn out, and was being rebuilt. The sills were good and the plank were sound on the under side, save where air had supplied the place of earth, and there they were destroyed by rot. The plank having been laid, the next thing is to grade a road some ten or twelve feet wide on one side, and two or three on the other, by taking earth from the ditches on each side, and bringing it by a ditch scraper just up to and even with the upper side of the plank, so that if a wheel runs off the track, it passes upon a smooth surface of earth. The ends of the plank should not be laid even, but a part should project from two to four inches by the general line, to prevent a rut being cut just along the ends of the plank. If the ends of the plank are even, and a small rut is made, the wheel of a loaded wagon will scrape along the ends for some distance before it will rise up to the top of the plank, unless the wagon moves in a direction nearly across the road; but if the wheel can not move two feet forward without coming square against the edge of a projecting plank, the difficulty of getting on the road is avoided. It is not necessary to pin or spike the plank to the sills.

Perfect drainage must be secured, and to that end the ditches must be deep and wide, and good sluices wherever water crosses the road. This is the important point—drain perfectly.

As to the cost of such a road, I will answer you by giving you a copy of my estimate for the Salina road, which very considerably exceeded the actual cost. It is proper to inform you that this road was made upon the bed of an old road, filled in many places with stone and logs. The right of way cost us nothing. The estimate was for plank three or four inches thick. Where we laid two tracks, we laid one of them with three inch plank, but the main track was four inches thick. It is economy to use thick plank if the travel is sufficient to wear out the road, but if it is to rot before it is worn out, then of course thin plank should be used. The Canada roads are generally three inches thick and are made of pine, and last about eight years.

Estimate of the cost of a single track plank road, eight feet wide, for one mile:

Sills 4 in. by 4 in. . . . .	14080 ft.	B. M.
8 ft. width of p'k 3 in. thick	127726 "	"
	140800	
At \$5 a thousand, . . . . .	5	
	\$704,00	
Laying and grading \$1, a rod, . . . . .	320,00	
	1024,00	
Engineering, Superintendence, etc. 10 per cent.	102 00	
	1126,00	
Gate houses, say \$100, . . . . .	100,000	
	1226,00	
For a 4 in. road add 42240 ft. at \$5 per M., . . . . .	211,00	
	1437,00	
Sluices, bridges and contingencies, . . . . .	63,00	
	\$1500,00	

We did not let out to contractors the construction of our road, for the reason that, we were very desirous of securing the bedding of the timber perfectly, a thing that my observation in Canada satisfied me was not always done, when the work was made by the rod; and as plank road making was a new business, no person was willing to undertake the work at the price estimated. By doing our work by the day, we not only secured its perfect construction in this particular, but we saved some thousands of dollars in the cost. After we had acquired experience and skill, we reduced the cost of grading and laying the road to from thirty to fifty cents a rod, including construction of sluices and bridges, and grubbing, and in short every thing but materials and superintendence.

If you make plank roads, I advise you by all means to do the work by the day, and put at the head of the business, a man who is fully competent to engineer and direct the whole matter. The variation of a few inches in the line of a road, may tell largely in the

cost of construction. The lumber you can best obtain by dividing the road into eighty rod sections, staking them out and letting them to the most favorable proposers—the lumber to be distributed along the line equally as near as may be, as it is delivered.

As to the value of plank roads to the public and to the owners, I can best answer you by saying that I have seen a McAdamsed road taken up, eight feet in width, to make room for a plank track—and by informing you that men who have travelled over the best roads in England, say that there is not in Great Britain as good a road as the Salina plank road.

Our stock cannot be purchased at par,—and various projects are being started for the extension of our road, and constructing other roads, radiating from the capital of our county.

Very respectfully,

Yours, &c.

GEO. GEDDES, Civil Engineer.

#### New York and Albany or Hudson River Railroad.

We find the following exceedingly appropriate article on this important subject, in a late number of the *New York Journal of Commerce*. It is from the able pen of a gentleman who has, often before, labored for the best interests of the city of New York, without having his labors—at the time—duly appreciated by those most deeply interested. He is, however, fortunately for the people, one of those men who, conscious of being right on the subject under consideration, labor on, even though others differ in opinion, and labor against them. In this great work, however, as in that of "city sewerage"—for which he labored long and devotedly—he may look for entire success, at an early day, if the property holders of New York can be made to see their own true interest.

From the *Journal of Commerce* of 19th December.

**Hudson River Railroad.**—The Hudson river, among its great benefits, accommodates a breadth of country on each side of it of about 20 miles, or a strip forty miles wide. The industry conducted within that space finds accommodation at the river towns for prosecuting its business with the city: accommodation of all sorts,—ware-houses, taverns, merchants, capital: indeed, all the arrangements necessary for the business of an active region of country. A railroad running through these towns will, at the close of navigation, take up the trade, where the boats have it, and carry it on without any other change than that of the medium of conveyance. The facilities of the kind above enumerated, will be quite as needful to those who use the railroad, as to those who use the river. There are people, however, intelligent, candid and respectable, who insist that a road running on the extreme right of the belt of forty miles, cut though it must be through cultivated fields and along small streams and rivulets, and over the mountains, and near the Housatonic road, would better accommodate the trade, be more profitable to New York, and yield a larger revenue on the stock. A mere statement of the case, so that reflection may seize hold of and act upon it, must set the matter right to most



minds. They will perceive that those who go to the river when the navigation is open, will conduct business there over a railroad when it is closed—that a road twenty miles to the right of the river would be of no use to those living on its left, and who in the winter might cross on the ice to a nearer conveyance—that no facilities for conducting trade would exist on the inland route—and that the wealth accumulated at the towns would be seriously diminished by a road that should divert from them their usual trade.

The inland road would, like our lateral canals, extend through a fine agricultural region, and like them not pay; the river road should be where the great trade has always been conducted to the profit of carriers and all engaged in it.

There are those also, who are constantly urging that a road along the river will be unable to stand competition with the river, unless the very highest speed is accomplished, such as is usual on the English roads, and that it will cost too much to adopt their plans.

The objection applies to any road between this and Albany, but the answer to it, as far as concerns the road in question, is most complete.

The Edinburgh Review for October, 1846, in a powerful article on "Railways at home and abroad," shows that what in England produces high speed, may more easily be obtained cheap, on the river route, than on any other whatever.

One great expense in building the English roads arose from the rails being sustained "on square stone blocks measuring two feet on the side, and twelve inches deep. Cross sleepers of timber (says the Review) were only used as temporary supports on embankments until their settlement and consolidation should be effected by time and work. The stone blocks are, however, now everywhere abandoned, and the cross sleepers of timber permanently and universally established."

The cheap American plan of cross sleepers of timber, is found in England to be the best; proving that their expensive foundations did not constitute the element as is erroneously supposed, of their superiority in speed. It arose from other causes. They rejected all curves but those of a large radius, and restricted themselves to gradients of a low limit. See Page 260. These, obtained only at immense cost in England, were the main elements of their success in accomplishing high speed.

I attempted to show in a previous article, that the dip which occurred at the highlands in a long chain of mountains;—the course of the valley, straight almost as the flight of an arrow; the flow of the tide extending up to and beyond Albany; made the valley of the Hudson eminently suited for a railroad; and that we should abandon a great natural advantage, an advantage possessed by no other state aspiring to the western trade, to leave it and climb over the mountains.

The surveys show that the general route

through that valley is nearly level, and that the grades are not over seventeen feet in the mile. The few curves which exist have the wide radius of 2000 feet; in a line whose course is generally straight.

On the river route alone, nature has bestowed these important benefits,—benefits which make the transportation of passengers and goods cheap and rapid, which enable an engine of small power to do heavy work; which make the enormous expense that accrues from deep cuttings and heavy embankments unnecessary; and which save expense in maintaining the road, and in repairs, such as belong to those of high grades, built over mountains and across deep valleys.

Objection is also made to the use of this route on the ground of expected difficulty from snow and ice. The Emperor of Russia under the superintendence of Mr. Whistler, an American, is now building a road from St. Petersburg to Moscow, and would no doubt be quite amused to hear that in this latitude hesitation existed for such cause, on the part of those who preferred a route over mountains. It is estimated that every 80 yards of elevation is equivalent to one degree of latitude north, and that the mountains in question are from seven hundred to one thousand feet high. The great snow storm of February 1845 extended to the Boston and Albany road, but the track was cleared in about twenty-four hours. It lay for nearly a fortnight on a road much nearer home. The river road being on the east bank of the river, (the hills with an aspect to the West,) but little difficulty can be experienced from the melting of the snows, certainly as little as on any other route.

Those who are alarmed at the occasional passage of the road over the few shallow inlets of the river, may read with profit an article in the Foreign Quarterly for January, on the relative advantages of the routes through Asia proposed to the East India Company for a road to be built by them from Mirzapore to Calcutta; one, along the Ganges, the other and the favorite, extending over an extensive district of country subject to inundations, and but lately twenty feet under water, and requiring a causeway twenty-five feet high.

Trivial objections such as those which have been considered were long ago overcome in the progress of the railroad enterprises of the world, and if New York is to halt for them, she must not only go behind Boston, but behind all the world besides. They are objections not taken by Engineers, nor by persons who would probably otherwise be friends of this route.

While we are discussing them however, Boston is securing the trade that belongs rightfully to us, the trade with our back country, reached by us, except in the winter, through the valley of the Hudson and the Mohawk, and she is securing it as perfectly as if the Hudson flowed one quarter of the year from Albany to Boston.

Should some convulsion of nature deprive us of its waters, what amount would we not

pay to restore them to its banks; and yet its loss for one fourth of the time, (one year out of four,) and what is equivalent to its diversion for that time to Boston, make no impression on our sagacious capitalists!

A rivalry in extravagance, hitherto unknown, in our dwellings and their decoration, seems to animate them, instead of that exalted rivalry which civilization has lately called into play for the benefit of mankind.

Boston acts not thus, her railroads form a perfect net work over Massachusetts, and they are penetrating into our own state. Acting upon the cupidity of Northern and Western New York, to whom she offered a second market for their sales and purchases, she readily overcame every feeling of friendship and allegiance to this city, and from her liberality, her help to our main line of roads which this city would not build, procured weight and influence in the councils of our state.

This city has none. "You opposed our canal," said a member to me when pressing on him the necessity of this road; "you would not help to build our railroads; your best men take no part nor interest in our legislation, you cannot expect much sympathy for you here."

This is the contemptuous feeling which our want of public spirit has secured, and is likely to continue towards us, while the master spirits of Boston have won the respect of all men, and their counsels are listened to by the public functionaries of Massachusetts, and they take part and lot in the fortunes of the state.

A happy day will it be for New York, when our best citizens shall employ themselves in matters of public concern, and see that the impress of their opinion and acts is made on her future progress.

They may then ask some other question than the one which now may safely be answered in the affirmative, whether it will pay a good dividend should they subscribe to a road to Albany.

The city of New York has now before her, a charter, obtained with the greatest difficulty, and the maps and survey of the river route, which expires unless subscribed to by the first of March. An engineer of tried experience, and of undoubted integrity, whose services are withheld from a rival state, stands ready to stake a reputation not surpassed for prudence and skill, on the success of this enterprise, an enterprise which a few disinterested men, with a generous subscription of their own capital, present confidently to their fellow citizens.

GEO. B. BUTLER.

#### (Official) Reading Railroad.

A comparative statement of the business on the Philadelphia and Reading railroad for the week ending—

	Jan. 11, 1845.	Jan. 10, 1846.	Jan. 9, 1847.
Travel.....	\$1,475 33	\$1,549 24	\$2,279 54
Freight on goods.	1,194 91	1,895 16	2,035 01
" coal....	5,530 20	12,386 61	18,515 86
	\$8,200 44	\$13,831 01	\$22,823 41
Coal trans.—tons.	5,785	11,887	13,267



## A Railroad to the Pacific.

Geo. A. Wilkes, in the course of a pamphlet, urging the importance of a railroad from the Atlantic to the Pacific, says that "aside from the considerations of national aggrandizement this work is warranted by considerations which make their appeal as well to the heart of the philanthropist, as to the calculation of the statesman. It would not only bind with an absorbing and relentless attraction, the separate interests of the north and south, but would be a benefaction to the laboring masses of both, and would come with a peculiar grace from a parental government to its most deserving children. In addition, it would be an evidence in favor of the government, that among all the chartered privileges lavished time and again upon the rich, it had found it in its heart to make at least one charter for the poor." Lastly, if the magnetic telegraph should be added to this comprehensive scheme, where shall calculation look for the limits of its vast results? Basing our calculations upon our wonderful advance in the present century, it is no extravagance to predict that in less than fifty years, we shall behold in our beloved country, a government holding the preponderance of power, owning a population of a hundred millions, with a central capital in the great valley of the Mississippi, commanding from its nucleus of power an electric communication over three millions of square miles, and diffusing its enlarged spirit of liberty, philanthropy, peace and good-will, to the uttermost ends of the earth, in a fulness that will realize at least the fondest dreams of the millenium!" He also urges that the earliest practicable time should be adopted to carry out the design, and closes thus:

"While France and New Grenada meditate the segregation of the continent, and while England is employing an expensive squadron in the Arctic sea, we certainly are

called upon to avail ourselves of the superior advantages offered us within the bosom of our own territories, for accomplishing the same grand purpose which impels them.—We owe this to our own character and to future generations, and we also owe it to that spirit of progress which, directed by the spirit of Columbus, awakened our continent from its sleep in the abyss, and which, after having endured a check of four centuries as its only reward, now imperatively demands the consummation of its purpose. Arouse, then, America, and obey the mandate which destiny has imposed upon you for the redemption of a world! Send forth upon its errand the spirit of enfranchised man; nor let it pause till it enlarges the boundaries of freedom to the last meridian, and spreads its generous influence from pole to pole!"—*Phila. Inquirer.*

**BACK VOLUMES OF THE RAILROAD JOURNAL** for sale at the office, No. 105 Chestnut street.

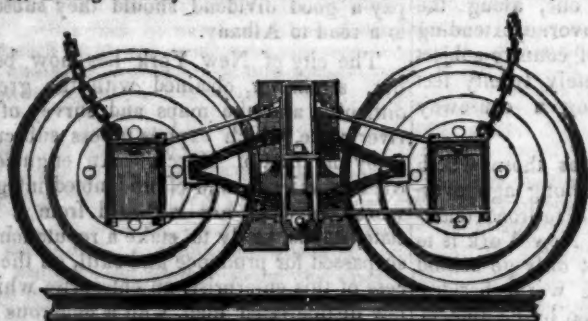
**A. & G. HALSTON & CO., NO. 4** South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz: 180 tons 2½ x 4 inch Flat Punched Rails, 20 ft. long 25 " 2½ x 4 " Flange Iron Rails. 75 " 1 x 1 " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures.

**RAILWAY IRON.—THE BEST QUALITY** of English Heavy H Rails—60 lbs. to the yard—now in store, landing from the vessel, and on ship board to arrive, for sale on most favorable terms by **DAVIS, BROOKS & CO.,** Jan. 2. [11f] 68 Broad St., New York.

**RAILROAD IRON.—THE NEW JERSEY** Iron Company, Boonton, N. J., are now preparing to make Railroad Bars, and are ready to take orders or make contracts for Rails, deliverable after the first of December next. Apply to **FULLER & BROWN, Agent,** No. 139 Greenwich, corner of Cedar street. September 18, 1846. 10c39

**RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER** having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its availability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills), and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846.

W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co. have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed,]

WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845.

[Signed,] G. A. NICOLL,

Sup't Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed,] T. L. SMITH,

Jersey City, November 4, 1845.

N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car. For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot,

[Signed,] JOHN LEACH,

Jamaica November 12, 1845.

Sup't Motive Power.

**NICOLL'S PATENT SAFETY SWITCH** for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee

G. A. NICOLL,  
Reading, Pa.

**RAILROAD IRON.—THE SUBSCRIBER'S** New Rail Iron Mill at Phoenixville, Pa., is expected to be ready to go into operation by the 1st of September, and will be capable of turning out 30 to 40 tons of finished Rails per day. They are now prepared to receive orders to that extent, deliverable after the 1st of October next, for heavy rails of any pattern now in use, equal in quality and finish to best imported.

**PIG IRON.**—They are also receiving weekly 150 to 200 tons of No. 1 Phoenix Foundry Iron, well adapted for light castings.

REEVES, BUCK & CO.,  
45 North Water St., Philadelphia,  
or by their Agent, ROBT. NICHOLS,  
79 Water St., New York

**THE SUBSCRIBERS, AGENTS FOR** the sale of

Codorus,  
Glendon,  
Spring M.I. and  
Valley,  
Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay orders for which are promptly supplied.

SAML. KIMBER, & CO.,

59 North Wharves,  
Philadelphia, Pa.  
Jan. 14, 1846. [1y4]





**RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.**

Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

**TEST No. 10.**

*Certificate from Mr. Silas C. Field, of Vicksburg, Mississippi.*

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited.

S. C. FIELD.

**TEST No. 11.—Certificate.**

By the fire which occurred in this village on the 27th July last, our Law Office, together with many other buildings, was destroyed—we had in our office one of Rich's Improved Patent Salamander Safes, which, though heated red hot, preserved, without being the least damaged, many papers valuable to our clients—the envelopes of a few papers being slightly scorched. Some twenty-four hours after the fire, the safe was removed, and so hot was it, that several hours were required for it to cool off. Our office was in the second story of a large brick building, all the wood used in construction of said house being pitch pine. While the safe was red hot, one of the walls tumbled in, and so injured the lock that it was necessary to break the door open. From this test, we feel no hesitancy in recommending "Rich's Patent Salamander Safe" as entirely fire proof.

GORE & KING.

Marion, Ala., Sept. 15th, 1846.

*Still other Tests in the Great Fire of July 19, 1845.*

The undersigned purchased of A. S. Martin, No. 138 1/2 Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was parched by the extreme heat.

RICHARDS & CRONKHITE.

Benton, Miss., December 27, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138 1/2 Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards.

(Signed.)

WM. BLOODGOOD.

New York, 21st July, 1845.

Reference made to upwards of nine hundred and fifty merchants, cashiers, brokers, and officers of courts and counties, who have Rich's Safe's in use.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from \$50 to \$500 each. For sale by

A. S. MARVIN, General Agent,

138 1/2 Water st., N. Y.

Also by Isaac Bridge, 76 Magazine street, New Orleans.

Also by Lewis M Hatch, 120 Meeting street Charleston, S. C.

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**FRENCH AND BAIRD'S PATENT SPARK ARRESTER.**

**TO THOSE INTERESTED IN** Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers, and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburg and Jackson Railroad, Vicksburg, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckley & Drury, Boston, will be promptly executed.

FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

.. The letters in the figures refer to the article given in the Journal of June, 1844.

ja45

**PATENT HAMMERED RAILROAD, SHIP**

and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed.

JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y. The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merriitt, New York; J. H. Whitney, do.; E. J. Eting, Philadelphia; Wm. E. Coffin & Co., Boston.

ja45

**MACHINE WORKS OF ROGERS,**

Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, Paterson, N. J., or 60 Wall street, N. York.

ja45

**PATENT RAILROAD, SHIP AND BOAT**

Spikes. The Troy Iron and Nail Factory keeps constantly for sale, a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

.. Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45

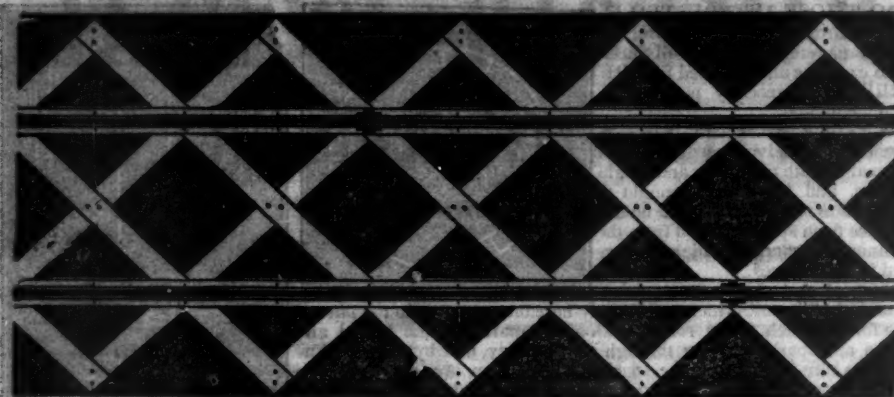
**DAVENPORT & BRIDGES CONTINUE**

to Manufacture to Order, at their Works, in Cambridgeport, Mass., Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.



## THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

**THE UNDERSIGNED RESPECTFULLY** invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes

but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

## ESTIMATE OF THE PROBABLE COST OF ONE MILE.

4,224 Timbers, 11 ft. long, 3 x 6 inches =	
68,696 ft. b.m., at \$10 =	\$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. =	
4,403 ft. b.m., at \$13 =	57 24
13,000 Spikes = 2,250 lbs. at 4½ cts. =	101 25
Workmanship free of patent charge =	600 00

Cost of one mile including the laying of the Rail ..... \$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia. 33tf

## ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—

for sale or imported to order by the subscriber. These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,

75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.			HEMPEN ROPES.			CHAINS.		STRENGTH Tons.
Wire gauge number.	Circumference of rope.	Weight per fathom.	Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	
	INCH.	LBS. OZ.	INCH.	LBS. OZ.		LBS.	INCH.	
11	4½	13 5	10	24 -	50	15-16	20	
13	3½	8 3	8½	16 -	27	11-16	13½	
14	3¼	6 11	7½	12 8	17	9-16	10½	
15	2½	5 2	6½	9 4	13½	1-2	7½	
16	2¼	4 3	6	8 8	10½	7-16	7	

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24

ENGINEERS' AND SURVEYORS'  
INSTRUMENTS MADE BY  
EDMUND DRAPER,  
Surviving partner of  
STANCLIFFE & DRAPER.



No 23 Pear street, below Walnut,  
1y10 near Third, Philadelphia.

LAP-WELDED  
WROUGHT IRON TUBES

FOR

## TUBULAR BOILERS,

FROM 1 1-4 TO 6 INCHES DIAMETER,  
and

ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

1y25

28 Platt street, New York.

## RAILROAD IRON.

## MOUNT SAVAGE IRON WORKS

THIS Company are prepared to execute orders for RAILROAD IRON, of any pattern, and equal in point of quality to any other manufactured.

Address J. M. HOWE,

Pres't. Mt. Savage Iron Works,  
Dec. 25, 1y\* Maryland.

## RAILROAD IRON.—THE "MONTGOMERY"

Iron Company, Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO., Agents.

1y48

77 Pine St., New York.

## RAILWAY IRON.—DAVIS, BROOKS

& Co., No. 68 Broad Street, have now in port on Ship-board, 200 Tons of the best English heavy H Rails, 60 lbs. to the lineal yard, which they offer for sale on favorable terms, also, about 6 to 700 Tons now on the way, to arrive shortly, of the same description of Rail.

Nov. 16, 1846.

46tf

## ENGINEERS and MACHINISTS.

THOMAS PROSSER, 28 Platt St. N. Y. (See Adv.)

J. F. WINSLOW, Albany Iron and Nail Works Troy, N. Y. (See Adv.)

TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)

ROGERS, KETCHUM & GROSVENOR, Paterson, N. J. (See Adv.)

S. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)

NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)

FRENCH & BAIRD, Philadelphia. (See Adv.)

NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)

ROSS WINANS, Baltimore, Md.

CYRUS ALGER & Co., South Boston Iron Co.

SETH ADAMS, Engineer, South Boston.

STILLMAN, ALLEN & Co., N. Y.

JAS. P. ALLAIRE, N. Y.

PHENIX FOUNDRY, N. Y.

ANDREW MENEELY, West Troy.

JOHN F. STARR, Philadelphia, Pa.

MERRICK & TOWNE, do.

HINCKLEY & DRURY, Boston.

C. C. ALGER, Stockbridge Iron Works Stockbridge, Mass.